

Abstract of the Disclosure

The safety in robotic operations is enhanced and the floor space in a factory or the like is effectively utilized. A virtual safety barrier 50 including the trajectory of movement of a work or tool 7 mounted on a wrist 5 of a robot 1 in operation is defined in a memory. At least two three-dimensional spatial regions S (S1 to S3) including a part of the robot including the work or tool are defined. Predicted positions of the defined three-dimensional spatial regions obtained by trajectory calculations are matched with the virtual safety barrier 50, and if the predicted position of any one of the defined three-dimensional spatial regions based on trajectory calculations is included in the virtual safety barrier 50, a control is effected to stop the movement of the robot arms 3 and 4.